Digital Services Operations and Management

Evolved IT technical operations

An Advisory Services PoV

CGI

Digital Services Operations and Management

We believe that constant evolution is the key to driving effective, cost-efficient IT technical operations.

IT technical operations have evolved from a model of onsite technicians being responsible for hands-on operational tasks, to a more remote, 'hands-off' approach that embraces monitoring and automation. This has consequently enabled the use of offshore or nearshore delivery models that maintain quality whilst simultaneously driving cost efficiencies.

But what is the next step in the evolution? The maturity of digital technologies has driven us towards **zero touch technical operations**, characterised by a lack of manual, human intervention. Our Digital Services Operations and Management approach therefore embraces lean methodology blended with automation and AI to create a 'self healing' solution, allowing experts to focus on complications instead of low-level technical resolutions.

Monitoring

Proactive system monitoring is one of the core elements of IT. If an organisation cannot see what is happening in its environment, it cannot react to fix any issues that arise.

A monitoring suite for all tooling is therefore a key first step in IT operations and management, enabling a comprehensive view of an IT environment with real-time diagnosis of alerts that either trigger an automated resolution, or get passed to specialists for root cause analysis.
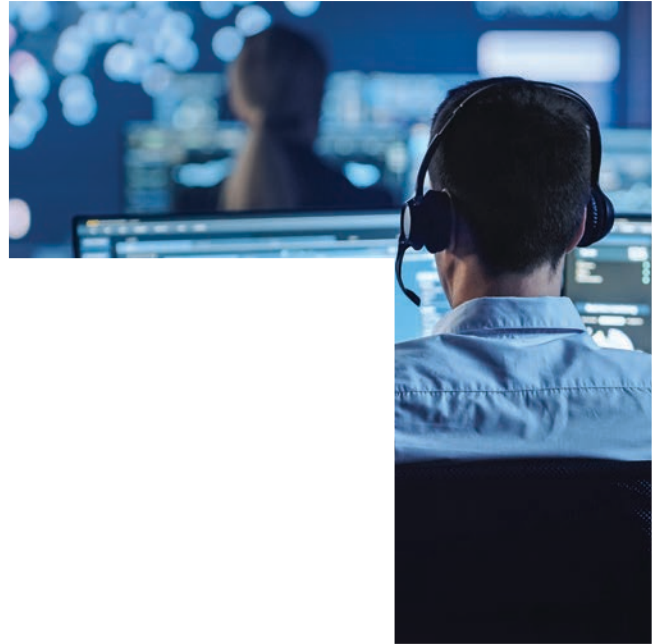
1 Alert determination

Monitoring tools generate alerts and messages about the infrastructure or application. Filtering alerts is an important first step, ensuring that the correct messages are prioritised and acted on accordingly. Another key process is determining which alerts should be passed to the AI engine for resolution.

2 Analytics

A key step in analysing and determining automated resolution paths is to correlate and find dependencies between alerts and messages, thereby providing insights into root cause analysis. This determines the root causes of problems and recurring issues, so that when repeated, the determined resolution path can be automated.

3 Specialist intervention

Analysing the data collected to determine resolutions or guided automated resolutions requires a level of specialism in that specific technical area. It also requires a cross functional group of specialists to look at the root cause data to determine how an AI engine can be programmed to determine the guided and automated resolution of incidents.

4 Automation

Helping you with the urgent work required to mobilize resources and systems to respond to the crisis and continue to support the vital workings of society.

Artificial intelligence led IT operations

On the surface, artificial intelligence led IT operations (AIOps) might be perceived as the evolution of an operations support model to drive cost efficiencies: but this is not AIOps' core purpose.

IT system evolutions rarely (if ever) involve retiring legacy technologies; instead, organisations add additional systems into their portfolio. This, along with the increasing adoption of cloud technologies, the drive towards a 'best of breed' sourcing approach, and the prevalence of bringing services back in-house is therefore adding to the complexity of IT operations.

AIOps platforms therefore blend multiple capabilities to address cross-domain data ingestion, analytics, security, pattern recognition, correlation, root cause identification, anomaly detection and task automation across complex ecosystems. This reduces the resolution time window and helps level 1 support become more zero touch, enabling technical operations specialists to prioritise service affecting root cause analysis and remediation. AIOps is therefore an integral component of Digital Services Operations and Management.

AIOps can be applied across numerous functional areas within technical operations:

Event correlation and processing – A holistic view of the enterprise, showing service affecting events and what has been (or is being) done to resolve the issue.

Capacity management – The ability to monitor the capacity utilisation of critical systems and when a threshold is met, alerting either a specialist to intervene or where practical, upping the available capacity. I.e., a database table to keep the system operational and allow specialist intervention for root cause analysis when the capacity is approaching a defined threshold.

Change management – Programming in changes that can be undertaken without manual intervention and reporting back on the status of the change. If unsuccessful, report/escalate for specialist intervention.

Governance and resource management – Similar to capacity management, providing continual observation of system performance through alerts and messages. When an event occurs and remedial action is needed such as patch management, this is initially triggered and driven by the AI engine, when resolution is not possible it is escalated to a specialist.

Disaster recovery – The guided and automated recovery of systems is a predetermined process under the control of the AI engine. Any errors can be corrected through guided resolution, or halted and escalated to a specialist for intervention.

Code deployment – The ability to auto deploy code based on a positive result from the change control process platform, reducing the time of delivery

Preventative security – The ability to identify, alert and quarantine user and data transactional actions based on security algorithms to prevent system breach and data loss before it has happened.

Modernised service management

Effective service management not only maintains control of a service portfolio; it enables flexibility and improves customer experience.

IT service management (ITSM) must evolve to keep pace with extreme levels of technology advancement and ever-increasing user expectations. In this sense, service management must enable rather than inhibit next generation IT services, whilst simultaneously protecting heritage services that continue to support your organisation.

We therefore use a shift-left approach to blend AIOps and automation with successful management frameworks, ensuring that IT services can deliver at pace through a streamlined process whilst also remaining compliant with the organisation.

Process evaluation

Our Advisory Services experts will help you understand the maturity of your ITSM practices to target specific issues and enhance your capability. We can also support your in-house team and IT services strategy by embedding skilled practitioners.

Our proven, phased approach is based upon ITIL and the Professional Service Management Framework. We examine current strengths and identify development opportunities, working together to address clients' business goals through remedial actions.

ITSM Strategy, Process Design & Implementation	ITSM Maturity Assessment	ITSM Tooling Assessment	SIAM Consultancy	Contact Channel Consultancy
• ITIL V3 process & 4 practice review and definition • Proof of concepts • Case study trials • Architecture and strategy validation	• ITIL V3 process & 4 based validation • Service value chains • High velocity IT • Transformation readiness	• Identify and match tooling for next generation ITSM • Cross-supply chain orchestration and performance management	• Adopting a disaggregation strategy and SIAM approach • Optimising value from the supply chain	• Optimising channels to improve the customer experience • For IT and non-IT based customer contact management

Benefits

By adopting digital technical operations you will empower your teams to work across infrastructure towers, simultaneously enabling the speed and agility to ensure uptime of critical services and deliver an optimised digital customer experience.

- Remove the noise and distractions of irrelevant alerts, enabling specialists to focus on what is important. This speeds up the detection and resolution of service affecting issues and consequently prevents outages that damage sales and customer experience.

- Centralise monitoring by connecting multiple data sources to eliminate silos, providing a holistic, contextualised vision across the IT environment.

- Facilitate cross-team collaboration between different specialists and service owners, resulting in accelerated diagnosis and resolution times to minimise disruption to end users.

- The AI engine's advanced machine learning captures useful information in the background, making it available in context to improve the handling of future incidents.

- Through knowledge recycling and root cause identification, the workflows for solving recurring incidents can be automated, moving operations teams towards a ticketless, self-healing environment.

- Well-defined, automated processes generate quality, fit for purpose results and enable engineering and service management specialists to focus on the 'value add' instead of repetitive processes.

- Focus on continual service improvement rather than keeping an existing process/system operational.

Our solution blueprint

The diagram below provides an overview of our approach to Digital Services Operations and Management.

Service Request Fulfillment	Cloud	DC Hosting	Server	Storage	Database	Network	Workplace	Security Operations Centre

Monitoring

BoT Triage

Event Correlation & Processing	Capacity Management	Change Management	Availabilty Performance Management	Disaster Recovery	Antivirus & Patch Management

Security	Orchestration & Automation	Artificial Intelligence	Analytics & Reporting	Configuration Management Database, Hardware, Software Asset Management & Discovery

Advisory Services

Technologies can help organisations to unlock their full potential – but only when done right. We understand that digital transformation isn't simple, and CGI dvisory Services is here to help you develop the right solutions which are aligned to your business capabilities, transforming the way your organisation works.

The Digital Backbone methodology is our portfolio of Advisory Services solutions, designed to encourage digital transformation and enable IT as an extension of our clients' organisations.

Target Operating Model, People & Organisational Change

- Cultural change adoption
- Align technical capability to business strategy
- Optimised business change enablement
- Reduced delivery lifecycle

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Digital Services Support Centre

- Omni-channel experience
- Virtual agent, AI and automation assisted support
- Expert system, 'click to fix' guided resolution
- Seamless routing and resolution

Digital Workplace

- Employee-focused, rich user experience
- Work from anywhere from any device
- Cloud-based productivity
- Unified communication and collaboration

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Digital Services Operations & Management

- End-to-end lifecycle of service
- ITIL and other best practice disciplines
- Real-time analytics for monitoring and resolution
- AI and automation led, zero touch approach

eSIAM

- End-to-end enterprise service operations and management
- Service introduction, release and change coordination
- Supplier (external and internal) performance management
- Business intelligence for IT

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Cloud Adoption & Management

- Cloud strategy and readiness
- Advanced application and environment management tools
- SIAM integration
- Migration factory

Digital DevOps

- Smart environment management and native tooling
- Structured testing and software release control
- Collaborative approach to release, enhance, update
- Embedded security with a shift left approach

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Security

- Assessment of risk
- Securing the IP and not just the perimeter
- Proactive security alert and threat management
- Identity and access management

Data & Analytics

- Big data
- Trend analysis and predictive outcomes
- Data operations
- Technology infrastructure needs

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Sustainability

- IT-enabled business platform for sustainability programmes
- Collate ideas and initiatives, prioritise, implement and measure
- Carbon consumption capture and reporting

About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across 21 industry sectors in 400 locations worldwide, our 88,500 professionals provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

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